Evaluation of Reliability of Stool Culture Methods for Isolation of Helicobacter pylori in Symptomatic Adolescence Patients with Gastrointestinal Disorders

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Background & Objectives: *Helicobacter pylori* recognized as the main etiological agent of peptic ulcers and chronic gastritis.Fecal-oral is recommended as one of the probable routs of its spreading; it can be proved when active forms of bacterium isolate from feces of infected people but there are only a few successesful attempts. Our main goal was that, too.

Methods: From total 98 symptomatic adult patients have been referred to the endoscopy ward of motahary clinic in shiraz-Iran, antral biopsies were taken for Rut, culture and histopathology visualization and fresh stool gathered from each one simultaneously were cultivated for isolation of *H.pylori* by two culture protocols after 24, 48 and 72 hours. First methods with trimetoprime and second with cholestyramine treatment. All suspected *H.pylori* colonies checked with biochemical *H.pylori* identification tests. Final confirmations were done with multiplex PCR methods.

Results: After 24 hoursby the first Methods 66% of manual inoculated *H. pylori* could not convert to cultivable form; it determined 34.5% by the second methods but after 48 hours 50% and 22% was estimated, by two methods respectively. It was 47% and 22% after 72 hours. The highest isolation was 56% by cholestyramine treatment, after 48 hours. By the second methods revival amount of viable forms were equal at 48 and 72 hours (78%) but after 72 hours active forms shifted to coccoid shapes. But, in vivo, we could not isolate any vital *H. pylori* in no way.

Conclusion: Although our culturing results on controlling step by adding vital form of *H. pylori* to the feces of non patients illustrated cholestyramine improves recovery of *H. pylori* from stool, but in vivo, *H. pylori* were not isolated at all. We concluded during passing *H. pylori* through feces in adults, there are many degradative agents causing loss of *H. pylori* viability so it finally could not be cultivate although could be tracked by PCR or Ag detection analysis. So cholestyramine only could improve the yield of *H. pylori* from stool when morphological shifts occurred from spiral shape to coccoid form.

Keywords: Symptomatic Adolescence; Stool Culture Methods; *Helicobacter pylori*